Wavemat large-area ECR plasma source

Wavemat Inc has introduced the MPDR 325i ECR microwave plasma source with automatic, closed-loop tuning for production processing of large substrates.

This advanced ECR plasma source generates a stream of low-energy ions, atomic neutrals and activated species that can be used to obtain exceptional thin film properties in a wide variety of applications.

The modification adds stepper motors, sensors and a control module to permit continuous, automatic tuning of the plasma source to compensate for multiple or changing process conditions.

It allows "optimum use of the MPDR 325i's plasma uniformity in production applications where manual tuning is unacceptable".

It has already been shown to greatly improve a wide variety of processes such as CVD of dielectric films and sub-0.25μm film etching of insulating and semiconducting thin films used in state-of-the-art microelectronic devices; and high-rate ECR plasma-enhanced CVD of diamond-like carbon, BN and other hard films," says Wavemat.

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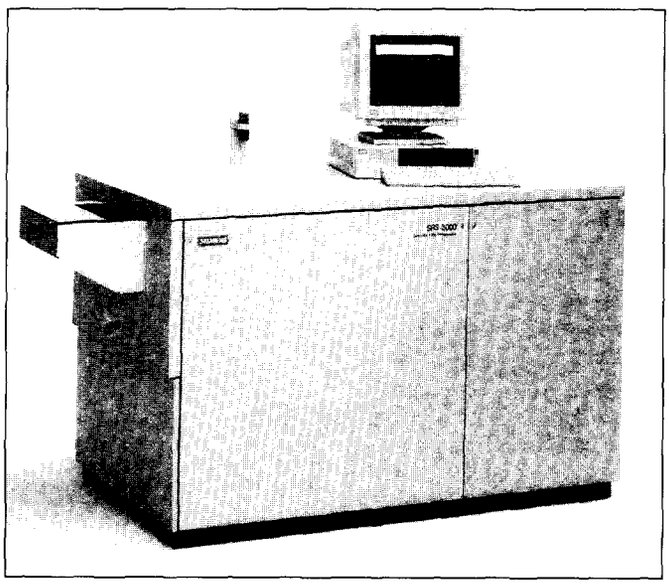
Siemens ND XRF analysis of very large samples and wafers

The new SRS 3000 LSA/WA Siemens Large Sample Analyzer/Wafer Analyzer was designed for non-destructive multi-element XRF analysis of very large samples of up to 10 in (25 cm) in diameter and up to 1.4-in (3.5 cm) in thickness such as large work pieces, wafer disks etc. This newly developed Siemens analytical X-ray system offers a high performance for different applications in process and quality control of the semiconductor and coating industry, etc.

The innovative sample magazine of the SRS 3000 LSA/WA consists of a microprocessor-controlled sample loader for manual loading of one very large sample or wafer of up to 10-in diameter, or automatic loading of wafer samples from an external wafer handling robot. An interchangeable internal 8-position template allows handing of 8 smaller samples of up to 2-in (52 mm) in diameter of the large sample.



An unlimited number of measurement points can be measured everywhere on the sample surface because of translation (smallest step: 0.1 mm) and rotation movements for mapping of element concentrations or layer thickness.

Based on the improved analytical capability of the SRS 3000 Siemens Sequential X-ray Spectrometer, all elements from Be to U can be analysed by qualitative, semi-quantitative and quantitative measurements in solid samples under vacuum. Depending on the specific application all concentrations from the ppm level up to 100% can be analysed directly without any dilution.

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TePla High throughput resist ashing

Based on the production-proven microwave plasma ashing technology, a whole new series of production batch ashing systems for cleanroom environment was introduced during Productronica 95 in Munich from TePla Technics Plasma GmbH, Kirchheim near Munich. The system development was guided by users of dry stripping systems to meet the needs in modern wafer fabrication, R&D and production.

The most advanced model is the "Plasma Processor 300 Autoload" and the major features include:

- Damage-free and defect-free plasma generation at microwave frequency for the use with sensitive chip technology
- Very low particle or metal contamination due to Autoload comfort, clean quartz chamber and attractive cleanroom cabinetry for thru-the-wall installation
- High throughput of 100 wafers/h up to 8-in dia
- 1000 W microwave power and proprietary coupling unit for high rates and uniform ashing
- Integrated PC controller with colour screen and operator-friendly software dedicated to fabrication
- Uncomplicated, rugged system design for easy maintenance, high uptime and reliable batch processing
- Minimum floor space and very low COO compared to single wafer systems

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